Summer oil emulsion sprays for use on foliage are old favorites for scale insect control and have very little toxicity to persons handling them. They have been used less since the advent of malathion, however, because the oil emulsions may injure ornamental plants if the oil sprays are on the foliage during periods of very hot (above 85° F.) or cold (below 40° F.) weather. Nevertheless, they are effective sprays and can be used during moderate weather in spring and fall. Use four tablespoons of the oil emulsion concentrate per gallon of water to make up the spray. Such full concentration sprays of oil emulsion should not be put on the plants again for at least a month. In general, oil sprays are not very effective against mealybugs and cottany cushion scales.

A combination of malathion or ethion plus oil emulsion has been more effective than either material applied alone for several scale insects. In this case the oil emulsion is used at a reduced concentration and thus with reduced chances of injury to plants. Mixtures of malathion or ethion and oil are commercially available in many areas. Or you can prepare your own by mixing 2 teaspoons of 50-57% malathion emulsion concentrate or 2 teaspoons of 25% ethion emulsion concentrate in one gallon of water. Then add a summer oil emulsion at the rate of 2 tablespoons per gallon of water.

b. Spider Mites:

Spider mites or "red spiders" are among the most common pests which attack ornamental plants in Florida. Home gardeners often do not realize that mites are present until the damage is severe, because these pests are so small and because they are usually more numerous on the undersides of the leaves.

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Mites are not insects but are more closely related to spiders and ticks. Fullgrown mites are usually no more than 1/50 inch in length. Many are smaller, and the use of a hand lens or magnifying glass is advisable when checking for their presence. They may be whitish and virtually colorless, through tan, reddish, or purplish in color. Mites feed by inserting a tiny sucking beak into plant tissue and withdrawing plant juices. This results in a small, colorless or whitish spot and in time the leaves have a finely stippled appearance.

(1) Control:

The most effective materials for controlling mites are miticides developed especially for these pests. In general, these materials, including Kelthane, Aramite, Tedion and Chlorobenzilate, are among the least toxic pesticides to persons handling them. A combination spray containing ethion plus oil emulsion, or malathion plus oil emulsion as discussed above for scales will give excellent control of spider mites.

One of the greatest aids in effective mite control is to commence treatments before the mite population builds to a large size. Learn to recognize the mites and their injury. Use a magnifying glass if necessary, and examine your plants frequently. Treat promptly when an infestation appears.

One of the older control methods used by home gardeners is syringing the underside of the leaves with a forceful spray of water. This dislodges many mites and regular treatments may succeed in keeping the population below a damaging level but generally is not satisfactory. Summer oil emulsion spray for use on foliage is another old remedy that is still effective, but thorough coverage is especially important. See cautions of use

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